

Cultural Context of Career Choice: Meta-Analysis of Race/Ethnicity Differences

Nadya A. Fouad
Angela M. Byars-Winston

The authors focus on career counseling from a cultural perspective, using the proxy construct of race/ethnicity. They briefly describe traditional career counseling and critique the degree to which the myriad cultural contexts that shape clients' career development are incorporated into vocational theories and practice. They conducted a meta-analysis of research that has investigated the relationship between culture and vocational choice variables and concluded (a) that race/ethnicity differences do not greatly affect career aspirations but (b) that there are differences among racial/ethnic groups in perceptions of career-related opportunities and barriers.

Career counseling must incorporate different variables and different processes to be effective for clients from different cultural contexts. Racial/ethnic minority clients are entering a labor market in which people of their own racial/ethnic group are concentrated in lower level positions and unskilled occupations, influencing their perception of the opportunities available to them (Bureau of Labor Statistics, 2002). Cultural context makes a difference in the way people make decisions and choose their work. Racial/ethnic minority individuals may also be faced with challenges of racism and discrimination. Thus, the external challenges that racial/ethnic minority clients face differ from those faced by racial/ethnic majority clients. In addition, their perspectives about work and career decision making may simply be different. The purpose of this article is to synthesize from empirical research what is known about racial/ethnic differences in career choices.

Work is a cultural construction. Carter and Cook (1992) asserted that "from a cultural frame of reference, work is a functional aspect of life in that individuals contribute their skills and labor to their cultural societies and the maintenance of their families" (p. 199). As such, the meaning of work, the value placed on it, and the expectations about who should perform what types of work reflect the society in which work is organized. Many researchers (cf. Cheatham, 1990; Smith, 1983) have argued that the concept of work holds different meanings across groups as a function of their sociocultural, historical, and political experiences. This

Nadya A. Fouad, Department of Educational Psychology, University of Wisconsin-Milwaukee; Angela M. Byars-Winston, Department of Counseling Psychology, University of Wisconsin-Madison. Correspondence concerning this article should be addressed to Nadya A. Fouad, PO 413, Department of Educational Psychology, University of Wisconsin-Milwaukee, Milwaukee, WI 53201 (e-mail: nadya@uwm.edu).

article focuses on the ways that those different perspectives of work must be incorporated into career counseling to be effective for all populations. We first discuss traditional notions of career counseling, advocating for a more culture-centered approach, and then discuss the findings of a meta-analysis of the empirical literature that helps to inform our call for this culture-centered approach. The article concludes with recommendations for practice and research.

Career counseling is defined as "the process of assisting individuals in the development of a life-career with focus on the definition of the worker role and how that role interacts with other life roles" (National Career Development Association, 1997, p. 1). Career counseling has been found to be effective in helping clients become more career decided and in making vocational choices (Oliver & Spokane, 1988; Ryan, 1999; Spokane & Oliver, 1983; Whiston, Sexton, & Lasoff, 1998). In discussing results from Ryan's meta-analysis, S. D. Brown and Krane (2000) noted that five critical components contributed to the effectiveness of career counseling, but they also noted that little information is available on the role of race, gender, or sexual orientation on career interventions. In other words, although research shows that career counseling is effective, it is not clear how cultural variables may influence the career decision-making process and effective career counseling.

Some theorists have recently begun to discuss how cultural variables can enrich the career counseling process. S. D. Brown and Krane (2000) suggested the inclusion of cultural variables in defining the goal of career counseling to incorporate "goal-congruent work that will allow [individuals] to experience work, career and life satisfaction in a changing society" (p. 740). This definition allows for varying emphases of work in people's lives as well as for the cultural construction of work. Cook, Heppner, and O'Brien (2002) argued that clients do not make career decisions in a vacuum. Their ecological model of career counseling describes how society's norms and values (macrosystem) and the context in which clients reside (home, school, and work) interact with the individual to shape career decisions. They stated that "an exclusive focus on changing what [clients] do to limit their vocational potential is destined to fail" (p. 303), without also examining the ways that clients' microsystems and macrosystems "contribute to making [their] educational and vocational achievement . . . much more difficult" (p. 303). Thus, to be effective, career counselors need to understand not only the cultural values of the client, as advocated by D. Brown (2002), but also the multiple contexts in which he or she lives and how society has helped to frame his or her opportunities for and barriers to success.

Astin (1984) developed a sociopsychological causal model of career choice that includes both psychological (work motivation and work expectations) and cultural-environmental (gender role socialization and the structure of opportunity) factors. This sociopsychological perspective asserts that perceptions of the structure of occupational opportunity (i.e., the relative openness of various occupations to individuals possessing certain characteristics) play a crucial role in an individual's career aspirations and choice (Turner & Turner, 1995). Griffith (1980) argued that a differential career opportunity structure exists for all people. This differential structure influences how various racial/ethnic minority groups are so-

cialized to work as well as the development of their work-related expectations, aspirations, and behavior, both in actual and perceived opportunities for career choices. The models of Cook et al. (2002) and Astin illustrate that the paths to workforce participation and career success are greatly influenced by perceptions of, as well as the reality of, the occupational opportunity structure that is part of the macrosystem.

Consideration of the impact of the structure of occupational opportunity on career development highlights the interaction between an individual and the social contexts that constitute his or her environment (Miller, 1999). Unfortunately, this concept has not been incorporated into traditional theories of career choice and development, such as Holland's theory of Personalities in Work Environments (Spokane, Luchetta, & Richwine, 2002), Super's developmental theory (Super, Savickas, & Super, 1996), or the Theory of Work Adjustment (Dawis, 1996), leading Leong and Brown (1995) to challenge the cultural validity of many prevailing career theories.

Leong and Brown (1995) observed that research on contextual variables in vocational psychology has focused on establishing either cultural validity or culture specificity for career theories. From the cultural validity perspective, researchers have tested the adequacy of current majority theories across different ethnic populations, whereas those from the culture specificity perspective have examined the application of culture-specific variables relevant to a given ethnic group. Ideally, vocational psychological theories would be informed both by testing current theories for their relevance across populations and by identifying specific cultural variables that shape the vocational behavior of different groups. Although the importance of examining cultural relevance is increasingly being accepted and valued (Swanson & Gore, 2000), the field does not yet have an integrative theory of culture-centered vocational psychology. However, clients seeking vocational counseling are increasingly coming from diverse cultural perspectives and need services that incorporate their beliefs, values, and worldviews. To be effective, career counselors must change their traditional, individualistic approaches to counseling and incorporate culture-specific variables.

We noted earlier that it is important to understand how cultural factors shape the decisions that people make in order for counselors to effectively help people. Although the writers noted earlier have called for career counseling to be culture centered and have advocated for cultural perspectives to be more embedded in career counseling, little is known empirically about the role of culture—or its proxy, race/ethnicity (which has been used to simplify the assessment of culture)—in vocational processes. To increase our knowledge in this area, we conducted a meta-analysis of racial differences in variables related to career choice. A meta-analysis allowed us to synthesize the separate studies in this area, convert the variety of statistics into a common metric, and thus make some conclusions about the magnitude of differences across racial/ethnic groups on the variables of interest. Because we were primarily interested in differences in the way that individuals make career decisions in high school and college, we focused our review on recent studies of those variables directly associated with making an initial choice: career aspirations (influences and related interests and values), perceptions of opportunities and barriers, and tasks related to decision making and exploration. We also limited our review to empirical studies because we were

interested in what researchers have observed rather than in what scholars propose we may find or experts suggest we should do.

Method

Literature Search

The literature search began with searches of databases (e.g., PsycINFO, ERIC) and then included hand searches of the five major journals that publish empirical studies of career development: *The Career Development Quarterly*, *Journal of Vocational Behavior*, *Journal of Counseling & Development*, *Journal of Counseling Psychology*, and *Journal of Career Assessment*. A check was also made of the references cited in relevant articles, and additional appropriate articles were identified for inclusion.

Selection Criteria

We used several criteria to decide which articles should be included in the meta-analysis.

1. *Date*. We selected relevant articles from 1991 through spring 2004.
2. *Independent variable*. The independent variable of interest was differences between racial/ethnic groups, and, thus, we only included studies that compared two or more racial/ethnic groups (all of the studies included Whites). Several articles (e.g., Evans & Herr, 1994; Gainor & Lent, 1998; Lew, Allen, Papouchis, & Ritzler, 1998; Park & Harrison, 1995; Tang, Fouad, & Smith, 1999) examined within-group differences; however, they were not included in the meta-analysis because they did not compare two or more racial/ethnic groups.
3. *Dependent variables*. The dependent variables we examined were those directly associated with making an initial choice: career aspirations (influences and related interests and values), perceptions of opportunities and barriers, and tasks related to decision making and exploration.
4. *Independence*. We only included studies that were independent from each other so as not to inflate the results of a particular study. For example, although several studies used the National Educational Longitudinal Study database, we only included one study (Mau & Bikos, 2000) that used the database in our analysis.
5. *Data included*. We only included those studies that reported means and standard deviations or probability values for the analyses that had been conducted.

Readers will note that the above criteria did not include studies in which the sample comprised racial/ethnic minority participants but in which the independent variable of interest was not some measure of culture. Although those studies may give insight into the role of culture in vocational choice, if the study did not directly assess culture, we did not include it among the studies used in this research synthesis.

Study Characteristics

Data recorded for each study included the total sample size and the sample size for each racial/ethnic group. We coded the means, standard deviations,

statistics calculated (e.g., *t* test, *F* test), degrees of freedom, and the probability value for each study. When data were reported separately for each gender, we coded for gender. We also coded the age level of the group (high school, college, adult). We coded the type of study examined (correlational, experimental, analogue), the type of operational definition for the independent variable of race (self-report, racial/ethnic identity, other), and the dependent variable of career choice (open-ended questionnaire, author-generated instrument, or validated instrument). To ensure that we were consistent in coding across articles, three (one in each group of dependent variables) articles were coded by two raters independently, and agreement was found on all three articles.

Statistical Procedures

Two possible models in meta-analysis are the fixed effects and random effects models. In the former, it is assumed that the underlying effects are homogeneous; in the latter, it is assumed there is underlying heterogeneity in the studies. In this study, a random effects model was used, because it was not possible to identify random effects, and thus we assumed heterogeneity of effects (Durlak, Meerson, & Foster, 2003). Effect sizes were calculated for all studies, using Hedge's *g*, which indicates differences between means divided by the pooled standard deviation. Hedge's *g* provides an estimate of the number of standard deviations by which the average racial/ethnic group member differs from the average White member on the career choice variables. Effect sizes are also an indication of practical significance (Thompson, 2002). Cohen (1988) suggested a scale to indicate the strength of the effect size. He calculated that the difference between independent means (signified by *d*) may be small (.2), medium (.5), or large (.8). Consistent with recommendations by Thompson, we also included the confidence intervals for the effect sizes.

Results

A total of 16 studies met the criteria for inclusion in the meta-analysis. Table 1 lists the overall effect sizes (*g*) for the three dependent variables, along with confidence intervals and the number of cases. The 16 studies included a total of 19,611 participants; thus, although the number of studies included in each meta-analysis is small, the conclusions are based on a large number of individual cases.

Influences on Career Aspirations and Choice

Several studies examined the role of culture in aspiring to a career. Four studies (i.e., Lauer & Jones, 1991; Leung, Ivey, & Suzuki, 1994, Mau & Bikos, 2000; Tracey & Hopkins, 2001) asked 12,940 high school or college students, in an open-ended question, to indicate the career to which they aspired; coded the responses; and then analyzed differences across race/ethnicity and gender groups. Table 2 lists the effect sizes (Hedges's *g*) for each study on career aspiration or choice and the important study characteristics. The results indicated that racial/ethnic groups did not differ significantly in the careers to which they aspire ($g = .007$, $p = .87$, 95% CI = .08, .10). In general, then, self-reported racial/ethnic category did not explain much of the variance in career aspirations.

TABLE 1

Mean Effect Sizes (*g*) and Results of Outcome Variables

Outcome Variable	<i>k</i>	<i>N</i>	<i>g</i>	95% CI	<i>p</i>
Aspirations/choice	4	12,940	.01	-.08, .10	.87
Expectations/barriers	6	5,094	.38	.06, .69	.02
Decision making/exploration	4	1,577	.23	-.16, .62	.25

Note. *k* = number of studies; *N* = number of individual cases; *g* = Hedge's measure of effect size (random effects); CI = confidence interval.

Career Expectations and Perceptions of Opportunities and Barriers

We may conclude from the first analysis that there appear to be few differences in the careers that individuals hope to enter. In other words, race and ethnicity do not appear to curtail the career dreams that people have, but clearly, something occurs between the time that those dreams and aspirations emerge and the time that individuals enter an occupation, because racial/ethnic minorities are not proportionately represented across career fields in the labor force. The studies in this section attempted to explain factors that may operate in this process.

Six studies (i.e., Arbona & Novy, 1991; Chronister & McWhirter, 2004; Chung & Harmon, 1999; Luzzo, 1993; McWhirter, 1997; Perrone, Sedlacek, & Alexander, 2001) examined perceptions of expected career attainment or barriers to that attainment; the statistics for each of the studies are presented in Table 3. The overall mean effect was significant ($g = .375, p < .02, 95\% CI = .06, .69$) such that racial/ethnic minorities perceived fewer career opportunities and greater career barriers than did White individuals.

Career Decision Making and Exploration

The last set of studies examined the effect size of racial/ethnic differences in career decision making or exploration variables. Four studies (C. Brown,

TABLE 2

Individual Study Characteristics and Effect Sizes by Aspirations/Choice

Study	Outcome Variable	Participants	<i>N</i>	% Race		<i>g</i>	<i>SE</i>
				White	Meas.		
Lauver & Jones (1991)	Perceived career options	HS	893	66	SR	-.15	.07
Leung, Ivey, & Suzuki (1994)	Career options by interest area	CS	383	61	SR	.00	.11
Mau & Bikos (2000)	Occupational aspiration area	HS and PSS	7,398	75	SR	.02	.03
Tracey & Hopkins (2001)	Future job choice	HS	4,266	75	SR	.10	.04

Note. Race Meas. = race measure; *g* = Hedge's measure of effect size; HS = high school students; SR = self-report; CS = college students; PSS = postsecondary students.

TABLE 3
Individual Study Characteristics and Effect Sizes by Opportunities/Barriers

Study	Outcome Variable	Participants	N	% Race		g	SE
				White	Meas.		
Arbona & Novy (1991)	Expectations of future career	CS	740	85	SR	.40	.11
Chronister & McWhirter (2004)	Barriers	AW	74	58	SR	.10	.24
Chung & Harmon (1999)	Perceptions of occupational discrimination	CS	177	41	SQ	.77	.16
Luzzo (1993)	Barriers	CS	286	89	SR	1.22	.20
McWhirter (1997)	Barriers	HS	1,074	48	SR	-.23	.06
Perrone, Sedlacek, & Alexander (2001)	Factors influencing goals	CS	2,743	64	SR	.13	.04

Note. Race Meas. = race measure; *g* = Hedge's measure of effect size; CS = college students; SR = self-report; AW = adult women; SQ = standardized questionnaire; HS = high school students.

Darden, Shelton, & Dipoto, 1999; Gloria & Hird, 1999; Lundberg, Osborne, & Miner, 1997; Powell & Luzzo, 1998) met the inclusion criteria. Table 4 lists the effect sizes for each study, along with the study characteristics. Overall, the mean effect size was nonsignificant ($g = .223, p = .25, 95\% \text{ CI} = -.16, .62$). Thus, race or ethnicity seems to be unrelated to making career decisions, unless it is confounded with either fewer or greater opportunities to gain the skills and knowledge related to career decision making.

TABLE 4
Individual Study Characteristics and Effect Sizes by Decision Making/Exploration

Study	Outcome Variable	Participants	N	% Race		g	SE
				White	Meas.		
C. Brown, Darden, Shelton, & Dipoto (1999)	Exploration beliefs	HS	364	62	SR	.08	.11
Gloria & Hird (1999)	Decision making self-efficacy	CS	687	86	SR	.36	.11
Lundberg, Osborne, & Miner (1997)	Career development	HS	289	57	SR	.74	.12
Powell & Luzzo (1998)	Decision making	HS	237	28	SR	-.08	.14

Note. Race Meas. = race measure; *g* = Hedge's measure of effect size; HS = high school students; SR = self-report; CS = college students.

Discussion

We reviewed the extant literature that had examined race/ethnicity related to career choice variables. Race or ethnicity does not seem to contribute much to differences in career aspirations or decision-making attitudes (see also Byars & McCubbin, 2001; Fouad & Brown, 2000). There are, however, differences among racial/ethnic groups in perceptions of career opportunities and barriers. These significant differences are consistent with the sociopolitical context within which many visible racial/ethnic minorities work and live. As Gloria and Hird (1999) cogently noted, racial/ethnic minority students "may have the skills and abilities to successfully compete and make decisions regarding the world of work but may not believe that they will be allowed or accepted in the workforce" (p. 168). A discussion of opportunities and barriers needs to be incorporated into career counseling as explicit aspects of the career counseling process.

Fouad and Bingham's (1995) culturally appropriate career counseling model provides one context-sensitive approach to examining the effects of cultural variables from both the client's and counselor's lives on the identification of career issues and intervention planning. Leong and Hartung's (1997) model provides another, and Cook et al.'s (2002) ecological model offers a third perspective. Cook et al.'s model is the most comprehensive in suggesting that factors within the contexts in which clients work and live are strong influences on their career choices.

One implication of Cook et al.'s (2002) ecological model is that if career counselors focus primarily on intraindividual factors, such as interests or decision making, they may miss problems that are actually caused by the environment or context in which the individual is working. Our findings from the meta-analysis highlight the need to incorporate extraindividual factors. Three themes emerged from our results. First, race/ethnicity did not play a large role in career aspirations and career interests. Second, the perception of occupational opportunity appeared to be strongly related to race/ethnicity, and, third, race/ethnicity greatly influenced perceptions of career barriers. Combined, these findings indicate that individuals' career dreams (aspirations) are similar, yet students' perceptions of the opportunity to realize these dreams differ by racial/ethnic group. Perceived opportunities and perceived career barriers are individuals' conclusions about the structure of occupational opportunity. The culturally competent career counselor must attend to these perceptions and the associated environmental realities.

This study examined differences between racial/ethnic minority clients and those from the majority culture. Future research should use within-group research designs, rather than race-comparative designs, in order to learn more about important differences within groups related to social class, gender, age, or developmental stage. We encourage vocational researchers to incorporate a more complex cultural construction and operational definition of racial group membership in their research rather than using self-reported racial categories. Given the low influence of race/ethnicity on career aspirations and career development variables, researchers are also encouraged to move to an examination of contextual factors that influence the career development pro-

cess and real and perceived limitations to vocational choice. This examination would include other, important, variables that are important parts of individuals' microsystems and macrosystems, such as sexual orientation, gender, age, disability status, and spiritual beliefs, and that interact with race/ethnicity. It is critical to move to a broader understanding of the context in which clients make career decisions to effectively help them.

References

- Arbona, C., & Novy, D. M. (1991). Career aspirations and expectations of Black, Mexican American, and White students. *The Career Development Quarterly*, *39*, 231-239.
- Astin, H. (1984). The meaning of work in women's lives: A sociopsychological model of career choice and work behavior. *The Counseling Psychologist*, *12*, 117-126.
- Brown, C., Darden, E. E., Shelton M. C., & Dipoto, M. C. (1999). Career exploration and self-efficacy of high school students: Are there urban/suburban differences? *Journal of Career Assessment*, *7*, 227-237.
- Brown, D. (2002). The role of work and cultural values in occupational choice, satisfaction, and success: A theoretical statement. *Journal of Counseling & Development*, *80*, 48-56.
- Brown, S. D., & Krane, N. R. E. (2000). Four (or five) sessions and a cloud of dust: Old assumptions and new observations about career counseling. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 740-766). New York: Wiley.
- Byars, A. M., & McCubbin, L. D. (2001). Trends in career development research with racial/ethnic minorities: Prospects and challenges. In J. G. Ponterotto, J. M. Casas, L. A. Suzuki, & C. A. Alexander (Eds.), *Handbook of multicultural counseling* (2nd ed., pp. 633-654). Thousand Oaks, CA: Sage.
- Bureau of Labor Statistics. (2002). *2002 occupational employment statistics*. Retrieved June 2002, from <http://www.bls.gov>
- Carter, R. T., & Cook, D. A. (1992). A culturally relevant perspective for understanding the career paths of visible racial/ethnic group people. In H. D. Lea & Z. B. Leibowitz (Eds.), *Adult career development: Concepts, issues, and practices* (2nd ed., pp. 192-217). Alexandria, VA: National Career Development Association.
- Cheatham, H. E. (1990). Afrocentricity and career development of African Americans. *The Career Development Quarterly*, *38*, 334-346.
- Chronister, K. M., & McWhirter, E. H. (2004). Ethnic differences in career supports and barriers for battered women: A pilot study. *Journal of Career Assessment*, *12*, 169-187.
- Chung, Y. B., & Harmon, L. W. (1999). Assessment of perceived occupational opportunity for Black Americans. *Journal of Career Assessment*, *7*, 45-62.
- Cohen, J. (1988). Set correlation and contingency tables. *Applied Psychological Measurement*, *12*, 425-434.
- Cook, E. P., Heppner, M. J., & O'Brien, K. M. (2002). Career development of women of color and White women: Assumptions, conceptualization, and interventions from an ecological perspective. *The Career Development Quarterly*, *50*, 291-305.
- Dawis, R. V. (1996). The theory of work adjustment and person-environment-correspondence counseling. In D. Brown, L. Brooks, and Associates (Eds.), *Career choice and development* (3rd ed., pp. 75-120). San Francisco: Jossey-Bass.
- Durlak, J. A., Meerson, I., & Foster, C. J. E. (2003). Meta-analysis. In J. C. Thomas & M. Hersen (Eds.), *Understanding research in clinical and counseling psychology* (pp. 243-267). Mahwah, NJ: Erlbaum.
- Evans, K. M., & Herr, E. L. (1994). The influence of racial identity and the perception of discrimination on the career aspirations of African American men and women. *Journal of Vocational Behavior*, *44*, 173-184.

- Fouad, N. A., & Bingham, R. (1995). Career counseling with racial/ethnic minorities. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (2nd ed., pp. 331-366). Hillsdale, NJ: Erlbaum.
- Fouad, N. A., & Brown, M. (2000). Role of race and social class in development: Implications for counseling psychology. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 379-410). New York: Wiley.
- Gainor, K. A., & Lent, R. W. (1998). Social cognitive expectations and racial identity attitudes in predicting the math choice intentions of Black college students. *Journal of Counseling Psychology, 45*, 403-413.
- Gloria, A. M., & Hird, J. S. (1999). Influences of ethnic and nonethnic variables on the career decision-making self-efficacy of college students. *The Career Development Quarterly, 48*, 157-174.
- Griffith, A. R. (1980). Justification for a Black career development. *Counselor Education and Supervision, 19*, 301-309.
- Lauver, P. J., & Jones, R. M. (1991). Factors associated with perceived career options in American Indian, White, and Hispanic rural high school students. *Journal of Counseling Psychology, 38*, 159-166.
- Leong, F. T. L., & Brown, M. T. (1995). Theoretical issues in cross-cultural career development: Cultural validity and cultural specificity. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (2nd ed., pp. 143-180). Hillsdale, NJ: Erlbaum.
- Leong, F. T. L., & Hartung, P. (1997). Career assessment with culturally different clients: Proposing an integrative-sequential conceptual framework for cross-cultural career counseling research and practice. *Journal of Career Assessment, 5*, 183-202.
- Leung, S. A., Ivey, D., & Suzuki, L. (1994). Factors affecting the career aspirations of Asian Americans. *Journal of Counseling & Development, 72*, 404-410.
- Lew, A. S., Allen, R., Papouchis, N., & Ritzler, B. (1998). Achievement orientation and fear of success in Asian American college students. *Journal of Clinical Psychology, 54*, 97-108.
- Lundberg, D. J., Osborne, W. L., & Miner, C. U. (1997). Career maturity and personality preferences of Mexican American and Anglo-American adolescents. *Journal of Career Development, 23*, 203-213.
- Luzzo, D. A. (1993). Ethnic differences in college students' perceptions of barriers to career development. *Journal of Multicultural Counseling and Development, 21*, 227-236.
- Mau, W., & Bikos, L. H. (2000). Educational and vocational aspirations of minority and female students: A longitudinal study. *Journal of Counseling & Development, 78*, 186-194.
- McWhirter, E. H. (1997). Perceived barriers to education and career: Ethnic and gender differences. *Journal of Vocational Behavior, 50*, 124-140.
- Miller, V. M. (1999). The opportunity structure: Implications for career counseling. *Journal of Employment Counseling, 36*, 2-12.
- National Career Development Association. (1997). *Career counseling competencies*. Columbus, OH: Author.
- Oliver, L. W., & Spokane, A. R. (1988). Career intervention outcome: What contributes to client gain? *Journal of Counseling Psychology, 35*, 447-462.
- Park, S. E., & Harrison, A. A. (1995). Career-related interests and values, perceived control, and acculturation of Asian-American and Caucasian-American college students. *Journal of Applied Social Psychology, 25*, 1184-1203.
- Perrone, K. M., Sedlacek, W. E., & Alexander, C. M. (2001). Gender and ethnic differences in career goal attainment. *The Career Development Quarterly, 50*, 168-178.
- Powell, D. F., & Luzzo, D. A. (1998). Evaluating factors associated with the career maturity of high school students. *The Career Development Quarterly, 47*, 145-158.
- Ryan, N. E. (1999). *Career counseling and career choice goal attainment: A meta-analytically derived model for career counseling practice*. Unpublished doctoral dissertation, Loyola University, Chicago.

- Smith, E. J. (1983). Issues in racial minorities' career behavior. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (pp. 161–221). Hillsdale, NJ: Erlbaum.
- Spokane, A. R., Luchetta, E. J., & Richwine, M. H. (2002). Holland's theory of personalities in work environments. In D. Brown (Ed.), *Career choice and development* (4th ed., pp. 373–426). San Francisco: Jossey-Bass.
- Spokane, A. R., & Oliver, L. W. (1983). The outcomes of vocational psychology. In W. B. Walsh & S. H. Osipow (Eds.), *Handbook of vocational psychology* (pp. 99–116). Hillsdale, NJ: Erlbaum.
- Super, D. E., Savickas, M. L., & Super, C. M. (1996). The life-span, life-space approach to careers. In D. Brown, L. Brooks, & Associates (Eds.), *Career choice and development* (3rd ed., pp. 121–178). San Francisco: Jossey-Bass.
- Swanson, J. L., & Gore, P. A., Jr. (2000). Advances in vocational psychology theory and research. In S. D. Brown & R. W. Lent (Eds.), *Handbook of counseling psychology* (3rd ed., pp. 233–269). New York: Wiley.
- Tang, M., Fouad, N. A., & Smith, P. L. (1999). Asian Americans' career choices: A path model to examine factors influencing their career choices. *Journal of Vocational Behavior*, 54, 142–157.
- Thompson, B. (2002). "Statistical," "practical," and "clinical": How many kinds of significance do counselors need to consider? *Journal of Counseling & Development*, 80, 64–71.
- Tracey, T. J. G., & Hopkins, N. (2001). Correspondence of interests and abilities with occupational choice. *Journal of Counseling Psychology*, 48, 178–189.
- Turner, C., & Turner, B. (1995, April). *Race and sex discrimination in occupations: A 20-year replication*. Paper presented at the annual meeting of the Eastern Psychological Association, Boston.
- Whiston, S. C., Sexton, T. L., & Lasoff, D. L. (1998). Career intervention outcome: A replication and extension of Oliver and Spokane. *Journal of Counseling Psychology*, 45, 150–165.

Copyright of Career Development Quarterly is the property of National Career Development Association and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.